EXHIBIT 8

UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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GOOGLE LLC,
Petitioner,

v.

SINGULAR COMPUTING LLC,
Patent Owner.

_____

Case No. TBD
Patent No. 9,218,156

_____

DECLARATION OF RICHARD GOODIN

merely an example and does not constitute a limitation of the present invention."

'156 patent, 26:6-9.   Instead, the patent states that "the present invention **_may_** be

implemented using technologies that **_may enable_** other sorts of traditional digital

and analog computing processors" such as "various nanomechanical and

nanoelectronic technologies," or "chemistry based technologies such as for [sic]

DNA computing" or "nanowire and nanotube based technologies, … and **_other_**

[unstated] technologies whether based on transistors or not that are capable of

implementing LPHDR architectures." '156 patent, 26:6-20.   Independent claim 9

recites a "wherein" clause making clear that the generic "execution unit" in the

claims encompasses these technologies. '156 patent, 30:44-52.

55.   Along similar lines, the "operation" the execution unit performs

includes not only relatively simple arithmetic operations (11:48-52 ("addition,

multiplication, subtraction, and division")), but also more complex operations such

as "trigonometric functions" (27:20-29) and even "non-linear operations such as

exponentiation" (1:66-2:1).

56.   Additionally, the claims expressly cover **_non-deterministic_**

implementations, *i.e.*, execution units that produce different results for different

executions of the same operation on the same input. All of the challenged

independent claims recite "repeated execution" of the operation on "that same

input" and taking a "statistical mean" (which a POSA would have understood is an

average) of the output numerical values. *See* claims 1, 16, and 33. As I explain in

paragraphs 57-60 below, a POSA would have understood that the claims expressly

cover non-deterministic embodiments via the recited "statistical mean" provisions.

57.   The specification says some embodiments (*e.g.*, analog embodiments)

are non-deterministic. In discussing the prior art, the patent describes prior art

"[a]rray processors" that "use analog representations of numbers and analog

circuits to perform computations," and states that the "***SCAMP***" computer "is such

a machine." '156 patent, 4:11-13. The patent notes that "[t]hese

machines…introduce noise into their computations, so the computations are not

repeatable." '156 patent, 4:13-17. Later, when describing its embodiments, the

patent states that "[s]ome embodiments of the present invention may include

analog representations and processing methods." '156 patent, 14:19-20. The

patent states that "[s]uch methods, often called Analog methods, can be used to

perform LPHDR arithmetic in the broad range of architectures we have discussed,

of which SIMD is one example," and then states that "[a]n example of an ***analog***

SIMD architecture is the ***SCAMP*** design (and related designs) of ***Dudek***," where

"values have low dynamic range" and are "accurate roughly to within 1%." '156

patent, 14:26-33. The patent later purportedly describes "how to build an analog

SIMD machine that performs LPHDR arithmetic, and is thus an embodiment of the

present invention," '156 patent, 14:53-55, and states that in this purported machine,